

NEW TAXA AND COMBINATIONS IN MOURIRI
(MELASTOMATACEAE) FROM VENEZUELA

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MOURIRI ANGULICOSTA Morley, sp. nov.

Arbor glabra usque 30 m alta x 50 cm diametro; ramuli juvenes peranguste 4-alati. Laminae 3.6-7 cm longae, 1.6-2.6 cm latae, ellipticae usque ovatae vel leviter oblongae, apice abrupte acuminato vel caudato, basi acuta et abrupte attenuata; pagina inferior costae mediae angulata; petioli 2-4 mm longi. Sclerides terminales foliariae plerumque stellatae, interdum columnares; hypodermis plerumque praesens; cryptae stomatatae 25-35 μ altae, 22-65 μ latae, 20-65 in mm^2 . Flores sessiles, 1 in singuli pedunculis; pedunculi 1-5 ad axillas foliorum, 1-2.6 mm longi, 2-3 paribus bractearum ovato-triangularium. Calyx ovarium inferior includens 2.2-3 mm longus; lobi calycis triangulares, 0.5-0.6 mm longi. Petala alba vel viridi-alba, anguste obovata, acuta, 3.8-4 mm longa, 1.8-2.1 mm lata. Anthera 2.5-4 mm longa; thecae antherarum 0.8-1.2 mm longae, rimis apicalibus dehiscentes; glandula 0.2-0.3 mm longa. Ovarium 1-loculare; ovula 14-19 ad eandem altitudinem affixa. Fructus rubri-aurantiacus usque ruber, depresso-globosus, calyce coronatus, 6.5-11 mm altus, 9-13 mm diametro, 1 (-2-)spermus. Semina 6.5-7.3 mm alta, 7.6-8.4 mm lata, 5.2-5.7 mm crassa.

Type Collection: T. Morley 1156 (holotype MIN, isotypes to be distributed); moist primary forest in the Reserva Florestal Ducke, E of entry road at top of hill sloping S to headquarters buildings; common N and S of the buildings; near Manaus, Amazonas, Brazil, 21 Nov. 1966.

Paratypes: BRAZIL: Amazonas: J. A. da Costa S. 151, 9 Sept. 1968 (INPA, MIN), J. Aluizio 242, 29 Oct. 1968 (INPA, MIN), W. Rodrigues 5526, 22 Nov. 1963 (INPA), W. Rodrigues & D. Coelho 5591, 11 Dec. 1963 (INPA), W. Rodrigues & Osmarino 5713, 13 Feb. 1964 (INPA), and W. Rodrigues & Osmarino 6878, 23 Feb. 1965 (INPA), all from the Reserva Florestal Ducke near Manaus. Pará: E. Oliveira 4144, 29 Feb. 1968 (NY), Río Jari, Monte Dourado, Planalto.

SURINAM: P. J. M. Maas & J. A. Tawjoeran s.n., L.B.B. 10808, 15 May 1965 (U, MIN), Maratakka River, Snake Creek; Stahel 218, Aug. 1944 (A, BBS, IAN, K, US For. Prod.-Madison, U, WIS), Zanderij I; Utrecht, B. W. Herb. 1506, 4 Dec. 1915 (F, K, NY, RB, S, U, US), Zanderij I.

VENEZUELA: Bolivar: J. A. Steyermark 90433, 29 Dec. 1961 (F, NY, VEN), near the Río Ichún.

This species belongs to a complex of four, all with similar leaves and somewhat similar inflorescences and flowers, all in the section Brevipedillus of the subgenus Taphroxylon. The closest relative of the new species is M. myrtifolia Spruce ex Triana, from which M. angulicosta differs in having 4-winged twigs, stellate to columnar foliar sclereids, a lesser frequency and greater depth of stomatal crypts, a hypodermis (rarely absent), a sharply angled midrib, white to greenish-white petals, and a greater number of ovules. The two other species of the complex are M. duckeana Morley and M. duckeanoides Morley (ined.). From both of these M. angulicosta differs in having a sharply angled midrib, shorter anther glands and sporangia, and white to greenish-white petals. M. duckeanoides differs further in its larger stomatal crypts; M. duckeana in its case differs additionally in its unwinged twigs, puberulence, and larger ovule number. The one collection of M. angulicosta from Venezuela, cited above, differs from all other collections examined in lacking a hypodermis within the leaf. It agrees in other respects, however, and may be regarded as a local variant of uncertain status.

MOURIRI FICOIDES Morley, sp. nov.

Arbor usque 35 m alta x 45 cm diametro; ramuli juvenes teretes vel leviter canaliculati. Laminae 10.5-28.3 cm longae, 6.0-10.6 cm latae, elliptico-oblongae usque ellipticae vel leviter ovato-ellipticae, apice abrupte acuminato, basi abrupte attenuata vel late acuta usque rotundata; petioli 3-10 mm longi in pagina superiore. Sclerides terminales foliariae filiformes; cryptae stomatatae 70-90 μ altae, 18-35 μ latae, numerosae. Inflorescentiae cauliflorae usque ramuliflorae, non axillares, singulae 1-18-florae; pedicelli 3-10 mm longi. Calyx ovarium inferior includens 8-10 mm longus; hypanthium liberum nullum; lobi calycis 2-4.5 mm longi, 6-8 mm lati, late rotundati vel interdum late acuti vel leviter emarginati. Petala albida usque flavida, interdum rosea in parte superiore, late elliptica usque elliptico-obovata, 11-14 mm longa, 8.5-11 mm lata, apice rotundato. Filamenta 2.5-4.5 mm longa; antherae 3.5-4.5 mm altae, 2.3-3.3 mm latae ad basim; thecae antherarum hippocrepiformes, rimis longitudinaliter dehiscentibus; glandula 0.8-0.9 mm longa, subapicalis. Ovarium 5-loculare, ovula 10-12 in singulis loculis; placentae basiales in quoque loculo, ovula undique circum quamque placentam genita. Fructus edibilis, flavidus usque luteus clarus, subglobosus, calyce coronatus, 16-25 mm altus, 15-24 mm latus, 2-3 (-5-?) -spermus; semina 10-11 mm longa.

Type Collection: A. Ducke s.n., RB 25515 (holotype US; isotypes G, K, MG, P, RB, S, U, US; the same

collection under the number A. Ducke 44 is at A, F, US For. Prod.-Madison). Near small stream at km 5, Estrada do Aleixo, Manaus, Amazonas, Brazil, 17 Nov. 1931. "Arv. 30 m, calice verde, petalas externam. brancas com ponta rosea, internamente crém até alarandadas pallidas, filetes brancas, connectivo atro-violaceo." A Latin translation is usually given.

Paratypes: BRAZIL: Amazonas: G. A. Black 47-1636, 10 Oct. 1947 (IAN); A. Ducke 105, 13 Dec. 1935 and 2 Dec. 1942 (A, F, IAN, K, MG, MO, NY, S, US), all from Estrada do Aleixo, Manaus; T. Morley 1150, 17 Nov. 1966 (MIN); W. Rodrigues, M. Freitas, L. Coelho s.n., INPA 27730, 11 Nov. 1969 (INPA, MIN), and "Pessoal do C. P. F.", 26 Feb. 1958 (IAN, INPA), all from Parque 10, Manaus; L. Coelho & F. Mello s.n., 14 Dec. 1955 (INPA), BR 17, km 17, Manaus; O. P. Monteiro 8, 7 Nov. 1969 (INPA, MIN, US), Reserva Florestal Ducke, Manaus; J. M. Pires s.n., 24 Nov. 1945 (UC), 8 km from Manaus; J. M. Pires & G. A. Black 751, 26 Sept. 1945 (IAN), Manaus.

VENEZUELA: Amazonas: L. Williams 14018, 27 Jan. 1942 (F, IAN, NY, US, VEN), Yavita, alt. 128 m; L. Williams 14491, 27 Feb. 1942 (A, G, RB, US, VEN), San Carlos de Rio Negro, alt. 100 m; L. Williams 15576, 27 May 1942 (A, RB, US, VEN), Capihuara, Alto Casiquiare, alt. 120 m.

This species falls unmistakably in section Cyrtotheca of the subgenus Pericrene, where it is paired with a closely related plant, M. crassifolia Sagot. The broader leaves, longer petioles, cauliflorous to ramuliflorous flowers, longer pedicels, longer calyx and ovary, wider calyx lobes and petals, shorter filaments, larger anthers, and greater ovule number of M. ficoides all distinguish it from M. crassifolia. The two make an interesting pair. M. crassifolia occurs in Surinam, French Guiana, and Amapá and eastern Pará of Brazil; M. ficoides has been found near Manaus, Amazonas, Brazil, and in southern Amazonas, Venezuela. Both species occupy regions of 2000-3000 mm or more of annual rainfall and are separated by an area of about 1500 mm or less rainfall, as shown in J. Haffer, Speciation in Amazonian Forest Birds, Science 165: 131-137, 1969. The two distributions correspond rather well to two of the forest refuges postulated by Haffer, the Imerí and the Guiana. It therefore seems likely that climatic isolation has been largely responsible for the divergence of these two species.

MOURIRI GUIANENSIS Aublet ssp. BARINENSIS Morley, ssp. nov.

Fructus 14-18 mm altus, 13-18 mm diametro in sicco, supputatus 17-22 mm x 16-22 mm in vivo; semina 9.9-11 mm longa; cryptae stomatatae 13-90 μ diametro,

36-96 in mm².

Type Collection: F. J. Breteler 3722 (MICH, SP, U, US), Ticoporo forest reserve near Río Michay, 70° 40' W, 7° 55' N, Estado Barinas, Venezuela, 15 March, 1964.

Paratypes: VENEZUELA: Barinas: H. Jiménez Saa 1255, 2 Jan. 1971 (MIN, VEN); J. A. Steyermark, G. Bunting, C. Blanco 102075, 10 April 1968 (VEN), both from the Reserva Forestal de Caparo, 100 m elevation; A. L. Bernardi 1752, 11 Dec. 1954 (NY, VEN), Curbatico, La Vega, Poses, Ramón Díaz.

This subspecies is known only from the wet forests of Barinas, up to 300 m elevation. Its fruits are so much larger than those of typical M. guianensis that there seems no doubt that it represents a distinct taxon of at least subspecific rank. Only fruiting collections have been made so far. By contrast, fruits of typical M. guianensis are 6.5-11 mm high x 6.2-11.7 mm in diameter dry, estimated 8-14 mm x 7.5-14.5 mm fresh, with seeds 7-9.3 mm long. Stomatal crypts in the typical plants are 13-50 μ in diameter, 75-400 per sq. mm, so that this character reinforces that of the fruit to some extent. Judging by the label data the plant is typically a tree 20-25 m high, whereas plants of the typical subspecies, although sometimes attaining this stature, are usually small often bushy trees to 10 m high. We await the collection of flowering material to see if the Barinas plants are still more distinct.

MOURIRI LONGIFOLIA (HBK.) Morley, comb. nov.

Myrtus longifolia HBK., Nova Gen. Sp. Plant. 7: 258. 1825.

I am indebted to Dr. Rogers McVaugh for pointing out to me that Myrtus longifolia must be a Mouriri. A careful examination of a fragment of a leaf from the type material at Paris showed him to be correct. Moreover, the anatomy was so distinctive that combined with the morphology and what was known of the fruit it was plain that the species was not synonymous with any other known species of Mouriri. The distinctive anatomical features are the single upper epidermis, the scarcity of mucilage walls in the epidermis, the absence of a hypodermis, the prevalence of tannin compounds, the filiform foliar sclereids, and the large stomatal crypts, which are 50-156 μ in diameter and 40-46 μ deep. The fruit which was once present with the type has long since disappeared, leaving the type sterile.

Recently a second collection of this species was made: M. Fariñas, J. Velasquez, & E. Medina 643, from Esmeralda, Amazonas, Venezuela. It agrees well with the type material. It bears fruit only; the fruit cor-

responds nicely with the description of that of the type, being pear-shaped with 5 calyx lobes, 2-locular, with 1 seed per locule. Close examination of the positions of the micropyle, the aborted ovules, and the vascular strand in the hilum did not reveal the type of placentation, although it appeared more like that of the subgenus Mouriri than that of Pericrene. The tubular midrib xylem almost certainly excludes M. longifolia from subgenus Taphroxylon. Thus the taxonomic position of this species remains unclear other than being probably in subgenus Mouriri or Pericrene.

Taking all into account, the most diagnostic features of M. longifolia are its large cordate leaves, its midrib which is flat above and angled below and which contains tubular xylem, its filiform foliar sclereids, large stomatal crypts, and pear-shaped 2-locular fruit with 1 seed per locule.

MOURIRI NIGRA (DC.) Morley, comb. nov.

Eugenia nigra DC., Prodrumus 3: 268. 1828.

Mouriri plasschaerti Pulle, Rec. Trav. Bot. Neerl. 6: 283. 1909.

I am likewise grateful to Dr. Rogers McVaugh for pointing out to me that Eugenia nigra must be a Mouriri. An examination of leaf material from the type at Munich verified his belief. This material is completely typical of Mouriri plasschaerti in morphology and anatomy. The description of the other features of E. nigra also agrees with M. plasschaerti except for the number of calyx lobes and corresponding marks on the fruit, said to be four. The flowers of this species are pentamerous; the report of 4 calyx lobes is almost certainly a mistake of some kind; it is possible, but unlikely, that the material studied was atypically tetramerous.